

APPENDIX E. MCAS MIRAMAR INRMP IMPLEMENTATION ACTION AND PROJECT SUMMARY

INRMP actions and projects are summarized by general topics (*e.g.*, Special Status Species Management, Vernal Pool Habitat Management, Fish and Wildlife Management). Within each of these general topics are specific objectives followed by individual actions and projects in four categories (if needed): In-house Management Actions, Ongoing Projects, Must Fund Projects, and Other Planned Projects.

These actions and projects are identified in chapters 7 and 9. Must fund and other planned projects are detailed in Appendix F in standardized format.

The below list of **general topics** with their **objectives** and actions and projects is presented in the order they appear in this INRMP. General Topic (in **bold**) follows the section number; objective(s) appear in ***bold/italics***. In-house Management Actions, Projects in Progress, Must Fund Projects, and Other Planned Projects are individually identified following each objective.

Section	General Topics/Objectives/Actions and Projects	Year Funding Requested					
		Ongoing/ Indefinitely /Annually/ As Needed	06	07	08	09	10
7.3.1	General Vegetation Management and Soil Conservation						
	<i>1. Develop and implement a program for natural land and habitat restoration and rehabilitation.</i>						
	<i>In-house Management Action</i>						
	Provide specifications for reseeding/revegetation of sites disturbed by Station activities.	x					
	<i>Projects in Progress</i>						
	Homestead Reservoir Slope Repair.	x					
	Slope Stabilization/Erosion Repair following the Cedar Fire for two ammunition bunkers to be completed in 2009 (Public Works Division project).	x					
	Coastal Sage Scrub Restoration Project (R-33) to be completed in 2007.	x					
	<i>Must Fund Projects</i>						
	Invasive Species Control (MI55353)	x					
	Minor Projects/Damage Repair (MI25555)	x					
	Agricultural Outlease Management (MI99006)	x					
	<i>Other Planned Projects</i>						
	Vegetation Mapping (MI85555)				x		
	Restore Eroded Areas (MI0600002)		x				x
	<i>2. Continue the LTEM program of vegetation and soil conditions on MCAS Miramar.</i>						
	<i>Must Fund Project</i>						
	Long-term Ecosystem Monitoring (MI95556)			x			
	<i>3. Maintain watershed productivity, quality, and functioning through an effective non-point source pollution control program (soil erosion control and maintenance of vegetative cover).</i>						
	<i>In-house Management Actions</i>						

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		Ongoing/ Indefinitely /Annually/ As Needed	06	07	08	09	10
	Identify potential effects of actions in floodplains early in the NEPA planning process.	x					
	Monitor stormwater discharge outfalls, annually (Environmental Engineering Division action).	x					
	<i>Project in Progress</i>						
	Post-Cedar Fire Watershed Restoration/Stabilization in San Clemente and West Sycamore Canyons to be completed in 2008 (Public Works Division project).	x					
7.3.2	Wildland Fire Management						
	<i>1. Support a Wildland Fire Management Program to protect high value human and natural resource areas from catastrophic wildfire while conserving resources and military operational flexibility.</i>						
	<i>In-house Management Actions</i>						
	Provide technical, natural resource-based support to the Fire Department for wildland fire management planning.	x					
	Revegetate a severely eroded portion of fire access road R-15 (jointly with Public Works Division and Fire Department).	x					
	<i>Project in Progress</i>						
	Wildland Fire Management Plan and Environmental Assessment anticipated to be completed by 2006 (Fire Department lead).	x					
	<i>2. Track and monitor effects of fires and fuel modifications to support hazardous fuel reduction actions in strategic areas of MCAS Miramar and enhance/maintain native plant diversity and improve wildlife habitat.</i>						
	<i>In-house Management Action</i>						
	Maintain an up-to-date GIS database of past fires and other fuel management activities.	x					
7.3.3	Grounds Maintenance and Landscaping						
	<i>Ensure that grounds maintenance and landscaping operations are consistent with natural resource goals and objectives.</i>						
	<i>In-house Management Actions</i>						
	Provide technical support for invasive landscape plant control.	x					
	Provide technical support for the flightline mowing program.	x					
	Provide technical support for weed/exotic plant control on the airfields to Public Works, Facilities Maintenance.	x					
7.4	Special Status Species Management						
	<i>1. Proactively maintain up-to-date presence/absence, distribution, and habitat data for all Special Status Species to support project and activity planning, management, and implementation on MCAS Miramar.</i>						
	<i>In-house Management Actions</i>						
	Maintain lists of species of regional concern to monitor status and address in NEPA reviews.	x					

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		Ongoing/ Indefinitely /Annually/ As Needed	06	07	08	09	10
	Use various media to create and maintain awareness of Station personnel of the sensitivity, values, and obligations regarding the conservation of Special Status Species and their habitat. This may include presentations, briefs, newspaper articles, special messages, and an information brochure.	x					
	<i>Projects in Progress</i>						
	Vernal Pool Resources Surveys (3,760 basins) to be completed by 2007.	x					
	Non-Vernal Pool Rare and Endangered Plant Surveys (West Miramar) to be completed by 2006.	x					
	Willow Monardella Long-term Trend Plot Monitoring data collection to be completed by 2006.	x					
	Endangered Del Mar Manzanita Long-Term Monitoring Program Development to be completed by 2007.	x					
	Vernal Pool Resources Surveys to be completed by 2008.	x					
	<i>Must Fund Projects</i>						
	Presence/Absence California Gnatcatcher Surveys (MI37405)		x		x		
	Endangered Least Bell's Vireo/Willow Flycatcher Surveys (MI97016)			x			x
	Non-Vernal Pool Endangered Plant Monitoring (MI0500005)				x		
	Vernal Pool Surveys (MI0NR03)					x	
	Endangered Quino Checkerspot Butterfly Survey (MI10NR09).						x
	2. Proactively manage Special Status Species habitat.						
	<i>In-house Management Actions</i>						
	Identify, map, and selectively field mark sites supporting endangered species likely to be affected by Station operations.	x					
	Produce sensitive resource GIS maps for Station staff to reference (updated every 6 months).	x					
	<i>Other Planned Project</i>						
	Endangered Willow Monardella Habitat Enhancement (MI0600003)		x				
	3. Monitor to ensure ESA Section 7 compliance, as set forth in existing biological opinions, for projects implemented or actions taken.						
	<i>In-house Management Action</i>						
	Monitor internal MCAS Miramar compliance commitments.	x					
7.5.1	Vernal Pool Habitat Management						
	1. Take proactive action to prevent damage to vernal pool habitat.						
	<i>In-house Management Actions</i>						
	Continue resource conservation and protection awareness efforts.	x					

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		Ongoing/ Indefinitely /Annually/ As Needed	06	07	08	09	10
	Produce GIS maps of sensitive resources that show vernal pool habitat and associated watersheds for distribution to Station planners (updated about every 6 months).	x					
	Field mark vernal pool habitats or groups with a reasonably high likelihood for accidental damage by Marine Corps activities.	x					
	Work continuously with project and activity planners to avoid or minimize impacts to vernal pool habitat early in the planning process using the conservation approach identified in Chapter 5 as an initial planning tool to avoid areas containing a high density of vernal pool habitat (Level I MAs).	x					
	<i>Projects in Progress</i>						
	Fence the perimeter of the SANDER Parcel of the Station south of State Route 52 to reduce trespass damage, to be completed in 2005.	x					
	Continue the Vernal Pool Burn Study (MI0NR05) through 2009.	x					
	<i>Must Fund Project</i>						
	Vernal Pool Management (MI82949)	x					
	<i>Other Planned Projects</i>						
	Miramar Mounds Interpretative Trail (MI1000001)						x
	Vernal Pool Interpretive Display (MI0900001)					x	
	2. Develop and maintain high-quality and up-to-date GIS mapping of vernal pool habitat and its watersheds that supports proactive planning and impact avoidance.						
	<i>In-house Management Action</i>						
	Maintain an up-to-date GIS database by incorporating new field survey data.	x					
	3. Implement a program for vernal pool habitat restoration and re-establishment to maintain no net loss of vernal pool habitat basin resources.						
	<i>In-house Management Action</i>						
	Ensure completion of BRAC vernal pool habitat restoration projects.	x					
	<i>Projects in Progress</i>						
	Vernal Pool Restoration and Re-establishment Surveys, to be completed by 2006.	x					
	BRAC vernal pool habitat restoration projects (multiple), to be completed by 2006.	x					
	Restoration of 0.53 acres of Vernal Pool Habitat in the Miramar Mounds National Natural Landmark, to be completed in 2009.	x					
7.5.2	General Wetlands Management						
	Identify and manage wetlands on MCAS to maintain no net loss of wetland values.						
	<i>In-house Management Action</i>						
	Ensure compliance with existing and future Section 404 Clean Water Act permitting requirements.	x					

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		Ongoing/ Indefinitely /Annually/ As Needed	06	07	08	09	10
	<i>Must Fund Project</i>						
	Delineation of Non-vernal Pool Wetlands (MI97014)			x			
7.6.1	General Wildlife Management						
	<i>Maintain healthy wildlife populations as a component of the ecosystem.</i>						
	<i>In-house Management Action</i>						
	Review NEPA documentation to address wildlife conservation issues.	x					
	<i>Must Fund Project</i>						
	Long-term Ecosystem Monitoring, Faunal Component (MI95556)				x		
7.6.2	Migratory Bird Management						
	<i>Manage migratory bird conservation compliance requirements to minimize conflicts with military mission requirements.</i>						
	<i>In-house Management Actions</i>						
	Ensure that migratory bird conservation, as required by Executive Order and DoD policy, is addressed in NEPA documentation.	x					
	Maintain the MCAS Miramar Special Purpose Migratory Bird Permit for non-readiness activities in good standing.	x					
	Upon completion of the final USFWS rule addressing military readiness activities and applicable DoD guidance, plan and/or program for necessary monitoring requirements.	x					
7.6.3	Wildlife Damage Management (Including Bird and Animal Air Strike Hazard)						
	<i>Reduce the potential for bird and other animal collisions with aircraft.</i>						
	<i>In-house Management Actions</i>						
	Provide technical biological assistance for the Station BAASH program.	x					
	Provide technical assistance and coordination for the flightline mowing program.	x					
	Support coordination with the Miramar Landfill bird abatement program, as needed.	x					
7.6.4	Integrated Pest Management						
	<i>Comply with the federal Insecticide, Fungicide, and Rodenticide Act and minimize the use of pesticides.</i>						
	<i>In-house Management Action</i>						
	Provide natural resource based technical support for the MCAS Miramar Integrated Pest Management Plan.	x					
	<i>Project in Progress</i>						
	Integrated Pest Management Plan for MCAS Miramar (Public Works Division project lead).	x					
7.7	Natural Resources-related Outdoor Recreation Management						

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		Ongoing/ Indefinitely /Annually/ As Needed	06	07	08	09	10
	<i>Provide outdoor recreation opportunities for MCAS Miramar personnel and the general public within constraints of the military mission and capability of the resources.</i>						
	<i>In-house Management Actions</i>						
	Provide technical assistance with fishery management at the Miramar Fish Pond.	x					
	Maintain a CDFG Aquaculture Permit for the Miramar Fish Pond.	x					
	Prepare natural resource information and briefings, as requested.	x					
7.8	Geospatial Data Management						
	<i>Maintain Station natural resources GIS database, ensuring all information is current and up-to-date; ensure that all GIS information is available to biologists, planners, contractors, and others in a quick and timely manner; and maintain an operational GPS unit to quickly and accurately map natural resources.</i>						
	<i>In-house Management Actions</i>						
	Ensure accurate and usable GIS deliverables from contracts.	x					
	Manage and merge data from surveys and studies to support GIS users.	x					
	Ensure equipment (GPS, printers, and plotters) are ready to use.	x					
	Develop and update database information for all GIS layers.	x					
	<i>Other Planned Projects</i>						
	Aerial Photo/Imagery (MI1NR08)			x			
	Aerial Photographs (MI65555)			x			
7.9	Cultural Resources Considerations						
	<i>Implement this INRMP in a manner consistent with the protection of cultural resources at MCAS Miramar.</i>						
	<i>In-house Management Action</i>						
	Ensure appropriate review of natural resource management projects by Cultural Resource Manager to ensure that adverse effects to archeological sites are avoided.	x					
7.10	INRMP Planning						
	<i>Review and update this INRMP at least every five years or when major changes are made to the natural resources program; coordinate this update with the USFWS and CDFG.</i>						
	<i>In-house Management Action</i>						
	Monitor and annually review implementation of this INRMP, as required by Marine Corps policy; report implementation progress; and record revisions necessary for the next INRMP update.	x					
	<i>Must Fund Project</i>						
	Prepare INRMP/Environmental Assessment (MI40225)					x	
9.2.1	INRMP Implementation Professional Staffing						

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	<i>Provide professional, well trained staffing and appropriate supplies and equipment for the MCAS Miramar natural resources program to effectively implement this INRMP.</i>						
	<i>Must Fund Projects</i>						
	Manpower (Labor) (MI37405)	x					
	Natural Resources Training/Travel (MI69690)	x					
	Natural Resources Supplies (MI72633)	x					
	GIS/GPS Supplies, Equipment, and Maintenance (MI22202)	x					
9.2.2	Project Support						
	<i>Provide project support needed to implement this INRMP.</i>						
	<i>In-house Action</i>						
	Ensure that all new leases, easements, and similar occupancy or use agreements of Station property do not preclude the execution of natural resource management activities by the Marine Corps.	x					
	<i>Must Fund Project</i>						
	Natural Resources Project Support (MI0300009)	x					